

REMARKS

Applicants have carefully reviewed the Office Action dated February 11, 2003. Applicants have amended Claims 32-37 to more clearly point out the present inventive concept. Reconsideration and favorable action is respectfully requested.

Claims 39-44 have been renumbered in the foregoing amendment as Claims 32-37. The amendment includes the renumbering of the claim dependencies as well.

Regarding Claims 32-37, rejected under 35 U.S.C. §112, second paragraph, this rejection is overcome by the foregoing amendment which clarifies the language of Claim 32 and also corrects the antecedent basis for the terms "the toner level" in line 3 and "the toner level register" in line 6 of Claim 32. Specifically, "the toner level" in line 3 has been changed to "a toner level" and "the term "the toner level register" in line 6 has been changed to "the first register" in the foregoing amendment. Further, the second step of Claim 32 as amended reads "decrementing the first register for the print engine at the printing location if *a comparison of* the accumulated value with the toner level for the printing location indicates that the accumulated value in the first register is less than or equal to the toner level of the print engine." Thus, the decrementing step is conditional upon comparing the accumulated value (of incremental pixel values) obtained in the first step with the actual toner level for the printing location. Note that it is not required to have prior information of the toner level since the comparison is not made until after toner values of all the pixels in a rasterized image are accumulated in the first register. Applicants respectfully submit that the §112 second paragraph rejection is overcome by the foregoing amendment and respectfully request the withdrawal of this rejection.

Regarding Claim 32, rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,663,750, Sakuma (*Sakuma*), this rejection is respectfully traversed as follows. The first step of Claim 32, as amended, reads "accumulating in the first register toner values, *expressed as an incremental value ranging from zero to a maximum value*, of all the pixels in a rasterized image prior to sending the print job to the printing location." *Sakuma*, as noted by the Examiner, calculates the amount of ink that will be consumed to print a given set of text data by calculating the total number of dots in the bit pattern memory for the text data and multiplying this number of volume of ink per dot in the disclosed single print engine device. (See Col. 4, lines 41-52 of *Sakuma*).

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Thus, this reference does not disclose the accumulation of toner values expressed as an incremental value for each pixel in a rasterized image as required in Applicants' Claim 32 as amended. Therefore, Applicants respectfully submit that *Sakuma* does not disclose the limitations recited in the first step of Applicants' Claim 32 and respectfully request the withdrawal of this rejection.

Regarding Claim 32, rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,530,527, *Fukasawa* (*Fukasawa*), Applicants respectfully traverse this rejection as follows. *Fukasawa*, like *Sakuma*, does not disclose the limitations recited in the first step of Applicants' Claim 32. In *Fukasawa*, Col. 2 at lines 54-60, it is disclosed that *Fukasawa* counts the colored print dot number in the print data, i.e., it counts the total number of dots in the print data, and uses this information, which is accumulated in a counter, in conjunction with information about the blackened rate for each of the respective colors. The blackened rates are determined "by calculating a total dot (pixel) number on the basis of a print area (paper size) of one page and the count value in the counter. Thus, *Fukasawa* clearly discloses simply counting the total number of dots to be printed in the print data and compares it with the total number of dots possible in a given page as a measure of the amount of ink that will be used to print the print data. As with the *Sakuma* reference, this is unlike Applicants' method which accumulates toner value for each pixel as incremental values, which values may range from zero to a maximum value for each pixel to provide a more accurate indication of the toner that will be required to print a given image.

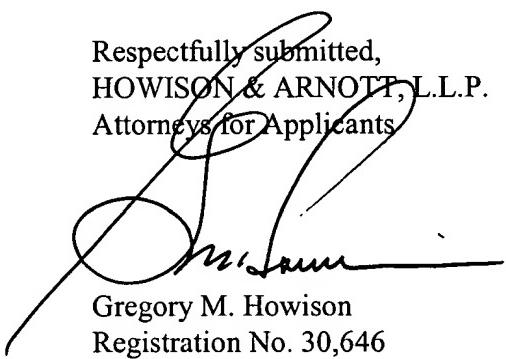
Moreover, it is set forth in the *Office Action* that the second step of Applicants' Claim 32, the decrementing step, "reads on a renewed value in the table for agitation control is added to the storage value," citing Col. 7, lines 10-24. Applicants respectfully point out first that this table as illustrated in Figure 4 of *Fukasawa* is not a toner level register. Rather, it relates the blackened rate levels with counts to be accumulated as the basis for determining when to re-agitate the toner mixture in order to maintain sufficient toner density during printing of images, e.g., graphics, having a need for high levels of toner provider. This table does not contain toner levels which are decremented as toner is consumed. Second, the second step of Applicants' claim uses the term "decrementing," whereas the cited passage is related to *adding* a renewed value to a storage value. Thus the disclosure in *Fukasawa* is just the opposite of Applicants' "decrementing" step because adding a renewed value to a storage value is an accumulation step, that is, it accumulates counts in proportion to the blackened rate of incoming print data to determine when to provide additional agitation of the toner mixture. Applicants point out that the term agitation in *Fukasawa* most logically appears to mean three different things,

during the agitation, and the dispensing of the toner into the development mechanisms of the printer. See, e.g., Col. 7, lines 15-20 in *Fukasawa*. Thus, *Fukasawa* does not disclose the accumulating step of Applicants' Claim 32 as amended nor does it disclose the decrementing step of Applicants' Claim 32 as amended. For the foregoing reasons, Applicants respectfully request the withdrawal of this rejection and the allowance of Claim 32 as amended.

Regarding Claims 33-37, which depend directly or ultimately from base Claim 32 and therefore include all of the limitations of the base claim, Applicants respectfully submit that dependent Claims 32-37 are likewise over the cited prior art and respectfully request the withdrawal of the rejection under both *Sakuma* and *Fukasawa* for the reasons presented hereinabove as to the base Claim 32 as amended.

Applicants have now made an earnest attempt in order to place this case in condition for allowance. For the reasons stated above, Applicants respectfully request full allowance of the claims as amended. Please charge any additional fees or deficiencies in fees or credit any overpayment to Deposit Account No. 20-0780/TRSY-25,474 of HOWISON & ARNOTT, L.L.P.

Respectfully submitted,
HOWISON & ARNOTT, L.L.P.
Attorneys for Applicants


Gregory M. Howison
Registration No. 30,646

GMH:ag
P.O. Box 741715
Dallas, Texas 75374-1715
Tel: 972-479-0462
Fax: 972-479-0464
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